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11/1

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,943	07/11/2003	Young Kil Kwon	2957-0136	3019
6449	7590	01/13/2005	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005				NGUYEN, TRAN N
ART UNIT		PAPER NUMBER		
		2834		

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/616,943	KWON ET AL.
	<b>Examiner</b> Tran N. Nguyen	<b>Art Unit</b> 2834

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 04 November 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 3-7,9 and 11 is/are allowed.
- 6) Claim(s) 1,2,8 and 10 is/are rejected.
- 7) Claim(s) 12 and 13 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. **Figure 1** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-2**, as understood, are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Elsel (US 4228374)**.

**Elsel** discloses a superconducting field coil (5); and cooling means for cooling the superconducting field coil by a low temperature end formed by means of heat and enthalpy flow generated by repeated compression and expansion of helium working fluid (col. 6 line 14+).

4. **Claims 1-2 and 8**, as understood, are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Laskaris (US 4,082,967)**.

**Laskaris** discloses an AC machine, such as a generator with a superconducting rotor (fig 1-2), with a cooling system located inside, comprising: a superconducting field coil; and

cooling means for cooling the superconducting field coil by a low temperature end formed by means of heat and enthalpy flow generated by repeated compression and expansion of helium working fluid. The armature disposed around the rotor being spaced apart from the superconducting rotor for generating magnetic field between the rotor and the stator is not shown. Inherently, the armature and its arrangement with respect to the rotor are essential component for an electric generator to functionally operate.

5. **Claims 1-2 and 10**, as understood, are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Joshi (US 5,482,919)**.

**Joshi** discloses an electric motor with a superconducting rotor (fig 1-2), with a cooling system located inside, comprising: a superconducting field coil; and cooling means for cooling the superconducting field coil by a low temperature end formed by means of heat and enthalpy flow generated by repeated compression and expansion of helium working fluid. The armature disposed around the rotor being spaced apart from the superconducting rotor for generating magnetic field between the rotor and the stator is not shown. Inherently, the armature and its arrangement with respect to the rotor are essential part for an electric motor to functionally operate.

#### *Allowable Subject Matter*

**Claims 3-7, 9 and 11** are allowed.

**Claims 12-13** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 11/04/04 have been fully considered but they are not persuasive because of the following:

The applicant argues that Elsel, as well as Kaskaris both do not disclose the cooling means for cooling the superconducting field coil by means of heat and enthalpy flow generated by repeated compression and expansion of a working fluid, wherein the recited cooling means is means-plus-function claimed element of a pulse tube refrigerator.

In response to this argument, both Elsel and Kaskaris disclose cooling means for superconducting field coil by cooling means of heat and enthalpy flow generated by repeated compression and expansion of a working fluid (see Elsel, col 6 lines 14+, and Kaskaris col 4 lines 4+). Both of the cooling means, disclosed by Elsel and Kaskaris, do include means that generating heat and enthalpy flow of a helium, as working fluid, and both of the disclosed cooling means function as cooling system to reduce generated thermal heat of the superconducting field coil thereof. Thus, the claimed cooling means is broadly read on both Elsel and Kaskaris references.

Regarding the argument that the claimed cooling means is pulse tube refrigerator, are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant argues that the cooling means of Joshi's ref includes a reciprocating piston within the cyrocooler but not a pulse tube generator utilizes a gas piston.

Even though the applicant has his point, however, it is noted that the features upon which applicant relies (i.e. pulse tube refrigerator having a gas piston,) are not recited in the rejected claims 1-2, 8 and 10. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, the rejections against claims 1-2, 8 and 10 are proper and hereby maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

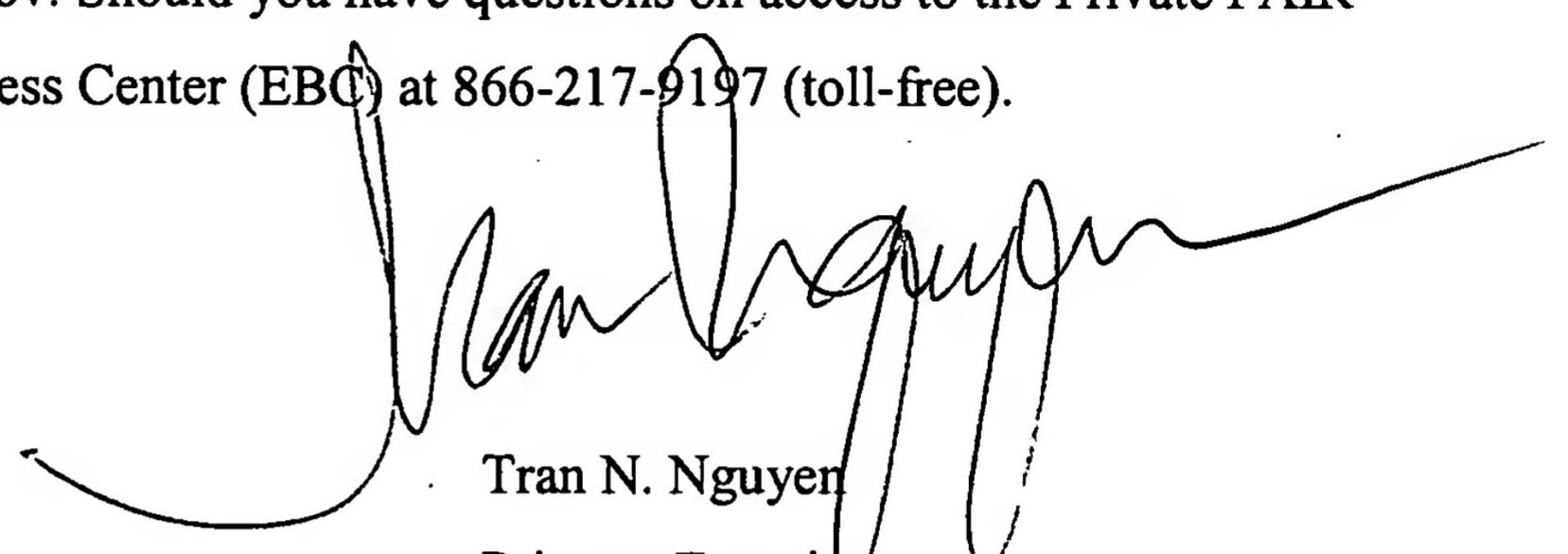
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen

Primary Examiner

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